

Title (en)

METHOD FOR LIQUID RADIOACTIVE WASTE REPROCESSING

Title (de)

VERFAHREN ZUR UMVERARBEITUNG VON FLÜSSIGEN RADIOAKTIVEN ABFALLSTOFFEN

Title (fr)

PROCÉDÉ DE TRANSFORMATION DE DÉCHETS RADIOACTIFS LIQUIDES

Publication

EP 2101333 A1 20090916 (EN)

Application

EP 07852046 A 20071107

Priority

- RU 2007000614 W 20071107
- RU 2006143293 A 20061206

Abstract (en)

The inventive methods are used for liquid radioactive waste (LRW) reprocessing by immobilizing radionuclides into a crystal material. Said methods consist in the synthesizing of insoluble compounds which immobilise long-lived radionuclides. The insoluble compounds in the form of salts or oxides are synthesised in hydrothermal conditions in a flow by passing LRWs being processed and reagents required for the synthesis through a layer of the insoluble particles at a speed enabling synthesizable radionuclide-containing compounds to be crystallized on the surface of the particles of the layer. Said insoluble particles are embodied in the form of metal oxides, for example, iron, manganese, cobalt, zirconium oxides or salts, for example, hydroxylapatite. The hydrothermal synthesis is carried out at a temperature range from 180°C to 250°C and a pressure range from 20 to 150 atm.

IPC 8 full level

G21F 9/16 (2006.01)

CPC (source: EP)

G21F 9/162 (2013.01)

Cited by

CN110447077A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 2101333 A1 20090916; EP 2101333 A4 20110413; EP 2101333 B1 20140430; RU 2321909 C1 20080410; WO 2008069694 A1 20080612

DOCDB simple family (application)

EP 07852046 A 20071107; RU 2006143293 A 20061206; RU 2007000614 W 20071107